

## CLASSES WITHIN THE U.S. CLASSIFICATION SYSTEM

Arranged by Related Subjects

## Main Groups

- |            |  |
|------------|--|
| GROUP I.   | CHEMICAL AND RELATED ARTS  |
| GROUP II.  | COMMUNICATIONS, RADIANT ENERGY, WEAPONS,<br>ELECTRICAL, AND COMPUTER ARTS  |
| GROUP III. | BODY TREATMENT AND CARE, HEATING AND COOLING,<br>MATERIAL HANDLING AND TREATMENT, MECHANICAL<br>MANUFACTURING, MECHANICAL POWER, STATIC, AND<br>RELATED ARTS |
| GROUP IV.  | INDUSTRIAL DESIGNS   |

**Note: In the following lists, classes preceded by an asterisk (e.g., \*250) appear more than once. Subject titles used may differ from official class titles.**

**Note: Subclass ranges in this listing of related classes reflect inclusive ranges as determined by their arrangement in the Manual of Classification; these ranges are not always in increasing sequential numerical order.**

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
<b>SUPERCONDUCTIVITY; LIFE AND AGRICULTURAL SCIENCES AND TESTING METHODS</b>		430*	RADIATION IMAGERY CHEMISTRY: PROCESS, COMPOSITION, OR PRODUCT THEREOF
Note: Specific lines or relationships between classes and subclasses as set out in the definitions and notes of the classes and subclasses involved are to be followed in the event of conflict with this list.		210*	LIQUID PURIFICATION OR SEPARATION /500.1-510.1, Filter material (compositions or materials for filtering).
505	SUPERCONDUCTOR TECHNOLOGY: APPARATUS, MATERIAL, PROCESS	55*	GAS SEPARATION /522-528, Specific media material.
977	NANOTECHNOLOGY	51*	ABRASIVE TOOL MAKING PROCESS, MATERIAL, OR COMPOSITION
800	MULTICELLULAR LIVING ORGANISMS AND UNMODIFIED PARTS THEREOF AND RELATED PROCESSES	429*	CHEMISTRY: ELECTRICAL CURRENT PRODUCING APPARATUS, PRODUCT, AND PROCESS
504	PLANT PROTECTING AND REGULATING COMPOSITIONS	136	BATTERIES: THERMOELECTRIC AND PHOTOELECTRIC
424 & 514	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	428*	STOCK MATERIALS OR MISCELLANEOUS ARTICLES /1.1-223
71	CHEMISTRY: FERTILIZERS	442	FABRIC (WOVEN, KNITTED, OR NONWOVEN TEXTILE OR CLOTH, ETC.)
435	CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY	428*	STOCK MATERIALS OR MISCELLANEOUS ARTICLES /292.1-543
436	CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING	<b>COMPOSITIONS AND SYNTHETIC RESINS; CHEMICAL COMPOUNDS</b>	
426	FOODS OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS, AND PRODUCTS	508	SOLID ANTI-FRICTION DEVICES, MATERIALS THEREFOR, LUBRICANT OR SEPARANT COMPOSITIONS FOR MOVING SOLID SURFACES, AND MISCELLANEOUS MINERAL OIL COMPOSITIONS
<b>STOCK MATERIALS; ARTICLES (E.G., LAYERED PRODUCTS, FILTERS, BATTERIES)</b>		44	FUEL AND RELATED COMPOSITIONS
503	RECORD RECEIVER HAVING PLURAL, INTERACTIVE LEAVES OR A COLORLESS COLOR FORMER, METHOD OF USE, OR DEVELOPER THEREFOR	148*	METAL TREATMENT /22-30, Compositions (employed in the treatment of solid metal, e.g., fluxes, protective paint on localized areas during carburizing or nitriding treatments).
148*	METAL TREATMENT /33-33.6, Barrier layer stock material, P-N type. /400-442 (Stock materials of diverse types; see subclass definition.)		

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
252* COMPOSITIONS /2-8.05, Fire-Extinguishing /601-611, Fire Retarding		106* COMPOSITIONS: COATING OR PLASTIC /600-316 (Alkali metal silicate containing (e.g., Portland cement, water glass); all the rest of the class subject matter.)	
507 EARTH BORING, WELL TREATING, AND OIL FIELD CHEMISTRY		75* SPECIALIZED METALLURGICAL PROCESSES, COMPOSITIONS FOR USE THEREIN, CONSOLIDATED METAL POWDER COMPOSITIONS, AND LOOSE METAL PARTICULATE MIXTURES /300-254, Compositions	
252* COMPOSITIONS /8.57-88.2 (Compositions of various specified special uses or functions.)		420 ALLOYS OR METALLIC COMPOSITIONS	
510 CLEANING COMPOSITIONS FOR SOLID SURFACES, AUXILIARY COMPOSITIONS THEREFOR, OR PROCESSES OF PREPARING THE COMPOSITIONS		518 CHEMISTRY: FISCHER-TROPSCH PROCESSES; OR PURIFICATION OR RECOVERY OF PRODUCTS THEREOF	
252*/ COMPOSITIONS /175-194 (Compositions of various specified special uses or functions.)		<b>520-528* Series of Classes: SYNTHETIC RESINS AND NATURAL RUBBERS</b>	
502 CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR: PRODUCT OR PROCESS OF MAKING		521 Ion-Exchange Polymers, Cellular Products, Waste Polymer Recovery.	
252* COMPOSITIONS /478-193, 380-407 (Compositions of various specified special uses or functions.) (See schedule for details.)		522 . Compositions to be polymerized or modified by wave energy wherein said composition contains a rate-affecting material; or processes of preparing or treating a solid polymer utilizing wave energy.	
252* COMPOSITIONS /408.1-183.16 (Compositions of various specified special uses or functions.)		523 & 524 Processes of preparing a desired or intentional composition of at least one nonreactant material and at least one solid polymer or specified intermediate condensation product, or product thereof.	
8* BLEACHING AND DYEING; FLUID TREATMENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS		525 Various preformed reaction products mixed with ethylenically unsaturated reactant; mixing plural solid polymers or chemically treating solid polymer, or product thereof.	
106* COMPOSITIONS: COATING OR PLASTIC /1.05-38.9 (Metal depositing; coating repellent; polishes; saturating or indurating; frost or ice preventive; corrosion inhibiting coating composition; hectographic or copying; containing fireproofing or biocidal agent; marking (e.g., inks); erasable surface; leak stopping; stains; dental; tractive or friction surface; sound recording; shoe filling; molds and mold coating compositions.)		526 Reaction zone features, and polymers from only ethylenic monomers or processes of polymerizing, polymerizable compositions containing only ethylene monomers as reactants or processes of preparing.	
501 COMPOSITIONS: CERAMIC		527 Solid polymers from specialized reactants (e.g., various cellular materials, protein, carbohydrate, tannin, lignin, coal, bituminous, natural resins), processes of preparing.	
		528 Solid polymers from various specified starting materials, or processes of preparing, and	

Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.

Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	treating polymer containing material or treating a solid polymer or a resinifiable intermediate condensation product.	530	CHEMISTRY: NATURAL RESINS OR DERIVATIVES; PEPTIDES OR PROTEINS; LIGNINS OR REACTION PRODUCTS THEREOF
520	SYNTHETIC RUBBERS OR NATURAL RUBBERS /1 (miscellaneous subclass, i.e., synthetic resins or natural rubbers not elsewhere provided for anywhere in the USPCS.)	930	PEPTIDE OR PROTEIN SEQUENCE (Note: This is a Cross-Reference Art Collection and does not accept applications.)
208*	MINERAL OILS: PROCESSES AND PRODUCTS /1-2, 14-23 (Mineral oil compositions.)	<b>532-570, Series of Classes: ORGANIC COMPOUNDS.</b>	
512	PERFUME COMPOSITIONS	534	. Radioactive or Rare Earth Metal Compounds; Azo and Diazo Compounds.
516	COLLOID SYSTEMS AND WETTING AGENTS; SUBCOMBINATIONS THEREOF; PROCESSES OF MAKING, STABILIZING, BREAKING, OR INHIBITING	536	. Carbohydrates or derivatives (e.g., pectin, glycosides, RNA, DNA, cellulose, starch, polysaccharides, etc.).
252*	COMPOSITIONS /363.5, 367.1, 372+, 378 (All of the various compositions of non-special uses or functions in Class 252. (See schedule for details.)	540+	. Heterocyclic carbon compounds; steroidal hetero compounds; four-membered lactams, azaporphyrins, nitrogen hetero rings of more than six members.
423*	CHEMISTRY OF INORGANIC COMPOUNDS /265-275 (Compositions perfecting inorganic compounds.)	544	. Hetero ring is six-membered having two or more ring hetero atoms of which at least one is nitrogen (e.g., selenazines, etc.).
127	SUGAR, STARCH, AND CARBOHYDRATES /29-33	546	. Six-membered ring with one hetero nitrogen and five carbons.
585*	CHEMISTRY OF HYDROCARBON COMPOUNDS /1-14, 240-242, Hydrocarbon mixtures	548	. Five-, four-, or three-membered nitrogen hetero ring compounds.
252*	COMPOSITIONS /1, Miscellaneous (i.e., compositions not elsewhere provided for anywhere in the USPCS.)	549	. Compounds containing sulfur or oxygen hetero ring compounds.
423*	CHEMISTRY OF INORGANIC COMPOUNDS (except subclasses 265-275)	552	. Azides. Triphenylmethanes, quinones, hydroquinones, steroids.
		554	. Fatty compounds having an acid moiety which contains the carboxyl of a carboxylic acid, salt, ester, or amide group bonded directly to one end of an acyclic chain of at least seven (7) uninterrupted carbons.
		556	. Heavy metal, aluminum, or silicon organic compounds.
		558	. Esters
		560	. Esters
		562	. Organic acids (e.g., carboxylic, sulphonic), acid halides, acid anhydrides, Selenium or Tellurium compounds.)
		564	. Amino nitrogen containing compounds (e.g., urea, sulfonamides, nitrosamines, oxyamines, etc., and salts thereof).
		568	. Boron, Phosphorus, Sulfur, or Oxygen compounds

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
570	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES . Halogen containing organic compounds	419	POWDER METALLURGY PROCESSES
260*	CHEMISTRY OF CARBON COMPOUNDS /665 . C-metal (light metal bonded directly to carbon) (e.g.; Grignard type, Beryllium containing, 1, 4-disodium naphthalene, phenyl magnesium chloride).	148*	METAL TREATMENT / 95-714, Processes of modifying or maintaining the internal physical structure (i.e., microstructure) or chemical properties of metal, processes of reactive coating of metal and processes of chemical-heat removing (e.g., flame-cutting) or burning of metal. (However, if metal casting, fusing bonding, machining, or working is involved, there is a requirement of significant heat treatment as described in Section III, A, of the Class 148 definition.)
585*	CHEMISTRY OF HYDROCARBON COMPOUNDS	75*	SPECIALIZED METALLURGICAL PROCESSES, COMPOSITIONS FOR USE THEREIN, CONSOLIDATED METAL POWDER COMPOSITIONS AND LOOSE METAL PARTICULATE MIXTURES /330-end
987	ORGANIC COMPOUNDS CONTAINING A BI, SB, AS, or P ATOM OR CONTAINING A METAL ATOM OF THE 6 <sup>TH</sup> OR 8 <sup>TH</sup> GROUP OF THE PERIODIC SYSTEM (Note: This is a Cross-Reference Art Collection and does not accept applications.)	205	ELECTROLYSIS: PROCESSES, COMPOSITIONS USED THEREIN, AND METHODS OF PREPARING THE COMPOSITIONS
260*	CHEMISTRY OF CARBON COMPOUNDS /1, MISCELLANEOUS (i.e., carbon compounds not elsewhere provided for anywhere in the USPCS).	204	CHEMISTRY: ELECTRICAL AND WAVE ENERGY
<b>CHEMICAL PROCESSING TECHNOLOGIES: PROCESSES AND APPARATUS (E.G., WAVE ENERGY, METALLURGY, SEPARATORY CONTACTING)</b>		266	METALLURGICAL APPARATUS
438	SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS	65	GLASS MANUFACTURING
117	SINGLE-CRYSTAL, ORIENTED-CRYSTAL, AND EPITAXY GROWTH PROCESSES; NON-COATING APPARATUS THEREFOR	264	PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING: PROCESSES
216	ETCHING A SUBSTRATE: PROCESSES	162	PAPER MAKING AND FIBER LIBERATION
156	ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE	48	GAS: HEATING AND ILLUMINATING
427	COATING PROCESSES (See also Group III, Class 101 for printing apparatus.)	208*	MINERAL OILS: PROCESSES AND PRODUCTS (Except subclasses 1-2, 14-23)
118	COATING APPARATUS	196	MINERAL OILS: APPARATUS

Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.

Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
127*	SUGAR, STARCH, AND CARBOHYDRATES /1-28, 34-71 (Apparatus and processes peculiar to the manufacture of carbohydrates; extraction, urification, and crystallization of sugars; extraction, purification, and treatment of starch; manufacture of sugars by hydrolysis of carbohydrates.)	201	DISTILLATION: PROCESSES, THERMOLYTIC
		202	DISTILLATION: APPARATUS
		203	DISTILLATION: PROCESSES, SEPARATORY
134	CLEANING AND LIQUID CONTACT WITH SOLIDS /1-42 (Processes.) (See also Group III, Class 134 for apparatus.)	159	CONCENTRATING EVAPORATORS
422	CHEMICAL APPARATUS AND PROCESS DISINFECTING, DEODORIZING, PRESERVING, OR STERILIZING	210*	LIQUID PURIFICATION OR SEPARATION (except subclasses 500.1-510.1) (See STOCK MATERIALS: ARTICLES for filter material.)
95	GAS SEPARATION: PROCESSES	23	CHEMISTRY: PHYSICAL PROCESSES
96	GAS SEPARATION: APPARATUS	588	HAZARDOUS OR TOXIC WASTE DESTRUCTION OR CONTAINMENT
55*	GAS SEPARATION (except subclasses 522-528)		
261	GAS AND LIQUID CONTACT APPARATUS		

---

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
505*	SUPERCONDUCTOR TECHNOLOGY: APPARATUS, MATERIAL, PROCESS (Involving Material Superconducting above 30k)	178	. Telegraphy
977	NANOTECHNOLOGY	375	. Pulse or Digital Communications
376	INDUCED NUCLEAR REACTIONS: PROCESSES, SYSTEMS, AND ELEMENTS	455	. Telecommunications
976	NUCLEAR TECHNOLOGY (Note: This is a Cross-Reference Art Collection and does not accept applications)	341	. Coded Data Generation or Conversion
380	CRYPTOGRAPHY	367	. Communications, Electrical: Acoustic Wave Systems and Devices
340	COMMUNICATIONS: ELECTRICAL	334	. Tuners
. Television		332	. Modulators
725	. Interactive video distribution systems	329	. Demodulators
386	. Television Signal Processing for Dynamic Recording or Reproducing	116	SIGNALS AND INDICATORS
358	. Facsimile and Static Presentation Processing	<b>CALCULATORS, COMPUTERS, OR DATA PROCESSING SYSTEMS</b>	
382	. Image Analysis	714	ERROR DETECTION/CORRECTION AND FAULT DETECTION/RECOVERY
345	. Computer Graphics Processing, Operator Interface Processing, and Selective Visual Display Systems	708*	ELECTRICAL COMPUTERS: ARITHMETIC PROCESSING AND CALCULATING /530-534 (arithmetical error detection or correction)
342	. Communications: Directive Radio Wave Systems and Devices (e.g., Radar, Radio Navigation)	235*	REGISTERS /375-386 (Systems Controlled by Data Bearing Records)
343	. Communications: Radio Wave Antennas	235*	REGISTERS /400-418 (Ordnance or Weapon System Computers) (See Section II for ammunition and weapons in general.)
370	. Multiplex Communications	235*	REGISTERS /419-434
381	. Electrical Audio Signal Processing Systems and Devices	701	DATA PROCESSING: VEHICLES, NAVIGATION, AND RELATIVE LOCATION
379	. Telephonic Communications		

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
702	DATA PROCESSING: MEASURING, CALIBRATING, OR TESTING	711	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: MEMORY
717	DATA PROCESSING: SOFTWARE DEVELOPMENT, INSTALLATION, AND MANAGEMENT	712	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: PROCESSING ARCHITECTURES AND INSTRUCTION PROCESSING (E.G., PROCESSORS)
704	DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS, LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION	713	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: SUPPORT
705	DATA PROCESSING: FINANCIAL, BUSINESS PRACTICE, MANAGEMENT, OR COST/PRICE DETERMINATION	377	ELECTRICAL PULSE COUNTERS, PULSE DIVIDERS, OR SHIFT REGISTERS: CIRCUITS AND SYSTEMS
706	DATA PROCESSING: ARTIFICIAL INTELLIGENCE	902	ELECTRONIC FUNDS TRANSFER
707	DATA PROCESSING: DATABASE AND FILE MANAGEMENT, DATA STRUCTURES, OR DOCUMENT PROCESSING	235*	REGISTERS /61-(Mechanical Calculators)
715	DATA PROCESSING: PRESENTATION PROCESSING OF DOCUMENT, OPERATOR INTERFACE PROCESSING, AND SCREEN SAVER DISPLAY PROCESSING	<b>INFORMATION STORAGE</b>	
716	DATA PROCESSING: DESIGN AND ANALYSIS OF CIRCUIT OR SEMICONDUCTOR MASK	720	DYNAMIC OPTICAL INFORMATION STORAGE OR RETRIEVAL
708	ELECTRICAL COMPUTERS: ARITHMETIC PROCESSING AND CALCULATING	369	DYNAMIC INFORMATION STORAGE OR RETRIEVAL
709	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: MULTIPLE COMPUTER OR PROCESS COORDINATING	360	DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL
718	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: VIRTUAL MACHINE TASK OR PROCESS MANAGEMENT OR TASK MANAGEMENT/CONTROL	365	STATIC INFORMATION STORAGE AND RETRIEVAL
719	ELECTRICAL COMPUTERS AND DIGITAL PROCESSING SYSTEMS: INTERPROGRAM COMMUNICATION OR INTERPROCESS COMMUNICATION (IPC)	235*	REGISTERS
710	ELECTRICAL COMPUTERS AND DIGITAL DATA PROCESSING SYSTEMS: INPUT/OUTPUT	347	INCREMENTAL PRINTING OF SYMBOLIC INFORMATION
		346	RECORDERS
		<b>MEASURING, TESTING, PRECISION INSTRUMENTS</b>	
		(See also Group I, Class 436, Chemistry: Analytical and Immunological Testing.)	
		73	MEASURING AND TESTING
		324	. Electricity: Measuring and Testing

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*



<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
250*	Radiant Energy (Radio and Microwave /250 Absorption Wavemeters)	355	PHOTOCOPYING
356	. Optics: Measuring and Testing	399	. Electrophotography
368	. Horology: Time Measuring Systems or Devices	353	OPTICS: IMAGE PROJECTORS
968	. Horology (Cross-Reference Art Collection)	362	ILLUMINATION
	(Note: This is a Cross-Reference Art Collection and does not accept applications)	84	MUSIC (See also Class 116, Signals and Indicators, subclasses 137 through 172; Class 340, Communications: Electrical, subclasses 384.1+.)
374	. Thermal Measuring and Testing	984	. MUSICAL INSTRUMENTS (Note: This is a Cross-Reference Art Collection and does not accept applications)
177	. Weighing Scales		
33	. Geometrical Instruments	181	ACOUSTICS
250*	RADIANT ENERGY (See also Group I, Class 204, Chemistry: Electrical and Wave Energy.)	361*	ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES (Nonelectrical device with electrical operation or control is classified with nonelectrical device.)
378	. X-ray or Gamma Ray Systems or Devices		
372	COHERENT LIGHT GENERATORS		<b>ELECTRICITY, HEATING</b>
385	OPTICAL WAVEGUIDES	219	. Electric Heating (See also Heating and Cooling, in Group III, for nonelectric heating)
349	LIQUID CRYSTAL CELLS, ELEMENTS AND SYSTEMS	392	. Electric Resistance Heating Devices
359	OPTICS: SYSTEMS (INCLUDING COMMUNICATION) AND ELEMENTS	373	. Industrial Electric Heating Furnaces
398	OPTICAL COMMUNICATIONS		
351	OPTICS: EYE EXAMINING, VISION TESTING AND CORRECTING		<b>ELECTRO-MECHANICAL SYSTEMS</b>
352	OPTICS: MOTION PICTURES	290	. Prime-Mover Dynamo Plants (See also Group III, Motors, Engines, Pumps.)
396	PHOTOGRAPHY (See Class 430, Radiation Imagery Chemistry: Process, Composition, or Product Thereof, in Group I.)	318	. Electricity: Motive Power Systems
		388	. Electricity: Motor Control Systems

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
187 . Elevator, Industrial Lift Truck, or Stationary Lift /247, 248, 277 -299, 316, 317, 380-399, For Vehicle (electric control) (See also Group III, Class 187.)		337 . Electricity: Electrothermally or Thermally Actuated Switches (See also Class 200, Electricity: Circuit Makers and Breakers, in this group, for mechanically actuated switches in general, and Class 335, Electricity: Magnetically Operated Switches, Magnets, and Electromagnets, in this group, for magnetically actuated switch structures.)	
<b>ELECTRICITY: SUBSYSTEMS, COMPONENTS, OR ELEMENTS</b>			
320 . Electricity: Battery or Capacitor Charging and Discharging		336 . Inductor Devices	
331 . Oscillators		361* . Electricity: Electrical Systems and Devices /500+ (Electrolytic Systems or Devices) (See also Group I, Class 136, Batteries: Thermoelectric and Photoelectric, and Class 204, Chemistry: Electrical and Wave Energy.)	
330 . Amplifiers			
307* ELECTRICAL TRANSMISSION OR INTERCONNECTION SYSTEMS /401- 424. Miscellaneous Nonlinear Reactor		361* . Electricity: Electrical Systems and Devices /271+ (Electrostatic Capacitors)	
327 . Miscellaneous Active Electrical Nonlinear Devices, Circuits, and Systems		338 . Electrical Resistors	
326 . Electronic Digital Logic Circuitry		200 . Electricity: Circuit Makers and Breakers (See also Class 335, Electricity: Magnetically Operated Switches, Magnets, and Electromagnets, in this group, for magnetically actuated switches, and Class 337, Electricity: Electrothermally or Thermally Actuated Switches, in this group, for thermally actuated switches.)	
333 . Wave Transmission Lines and Networks		218 . High-Voltage Switches With Arc Preventing or Extinguishing Devices	
363 . Electric Power Conversion Systems		174 . Electricity: Conductors and Insulators	
323 . Electricity: Power Supply or Regulation Systems			
315 . Electric Lamp and Discharge Devices: Systems			
314 . Electric Lamp and Discharge Devices: Consumable Electrodes			
322 . Electricity: Single Generator Systems			
307*. Electrical Transmission and Interconnection Systems			
313 . Electric Lamp and Discharge Devices			
257 . Active Solid-State Devices (e.g., Transistors, Solid-State Diodes)			
310 . Electrical Generator or Motor Structure			
335 . Electricity: Magnetically Operated Switches, Magnets, and Electromagnets (See also Class 200, Electricity: Circuit Makers and Breakers, in this group, for mechanically actuated switches in general, and Class 337, Electricity: Electrothermally or Thermally Actuated Switches, in this group, for thermally actuated switch structures.)			
		<b>AMMUNITION, WEAPONS</b>	
		60 . Power Plants (chemical reaction motors) /205-220 (See also Group III, Class 60, Power Plants, generally.)	
		89 . Ordnance (See also Group III, Class 124, Mechanical Guns and Projectors.)	
		244* . Aeronautics (Aerial Torpedoes) /14 (See also Group III, Class 244, Aeronautics.)	

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
114	. Ships (Torpedoes)		
	/20.1-25 (See also Group III, Class 114, Ships.)		
42	. Firearms		
102	. Ammunition and Explosives		
149	. Explosive and Thermic Compositions or Charges		
86	. Ammunition and Explosive-Charge Making		

---

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

ClassSubjectClassSubject

(This page was intentionally left blank.)

---

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>
505*	SUPERCONDUCTOR TECHNOLOGY: APPARATUS, MATERIAL, PROCESS
977	NANOTECHNOLOGY
<b>BODY TREATMENT CARE, ADORNMENT</b> (See also Group I, Class 424, Drug, Bio-Affecting and Body Treating Compositions.)	
433	. Dentistry
623	. Prosthesis (i.e., Artificial Body Members), Parts Thereof, or Aids and Accessories Therefor
128	. Surgery
600	. Surgery
601	. Surgery: Kinesitherapy
602	. Surgery: Splint, Brace, or Bandage
604	. Surgery
606	. Surgery
607	. Surgery: Light, Thermal, and Electrical Application
132	. Toilet
63	. Jewelry
27	. Undertaking
<b>APPAREL AND RELATED ARTS</b>	
2	. Apparel
223	. . Apparel Apparatus
450	. . Foundation Garments
36	. Boots, Shoes, and Leggings
12	. . Boot and Shoe Making

<u>Class</u>	<u>Subject</u>
69	. Leather Manufactures
112	. Sewing

**PLANT AND ANIMAL HUSBANDRY**

(See also Class 100, Presses, for balers; Class 289,  
Knots and Knot Tying; Class 460, Crop Threshing or  
Separating.)

449	. Bee Culture
452	. Butchering
43	. Fishing, Trapping, and Vermin Destroying
47	. Plant Husbandry
119	. Animal Husbandry
54	. . Harness for Working Animal
168	. . Farriery
231	. . Whips and Whip Apparatus

**TEACHING**

434	. Education and Demonstration
40	. Card, Picture, and Sign Exhibiting
472	AMUSEMENT DEVICES
463	. Amusement Devices: Games
473	. . Games Using Tangible Projectile
273	. . Amusement Devices: Games
446	. Amusement Devices: Toys
124	. Mechanical Guns and Projectors
482	. Exercise Devices

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

Class      Subject

99\*    FOODS AND BEVERAGES: APPARATUS  
/275-450 (See also Group I, Class 426, for food  
compositions and processes.)

**HEATING, COOLING**

(See also Group II, Class 219, for electric heating.)

62      . Refrigeration

237     . Heating Systems

236     . Automatic Temperature and Humidity  
Regulation

432     . Heating

122     . Liquid Heaters and Vaporizers

126     . Stoves and Furnaces

431     . Combustion

110\*    . . Furnaces (Solid or Combined Fuels)

165     . Heat Exchange

**BUILDINGS**

135     . Tent, Canopy, Umbrella, or Cane

109     . Safes, Bank Protection, or a Related Device

52      . Static Structures (e.g., Buildings)

14      . . Bridges

404     . . Road Structure, Process, or Apparatus

182     . . Fire Escape, Ladder, or Scaffold

220     RECEPTACLES

312     . Supports: Cabinet Structure

Class      Subject

190     . Trunks and Hand-Carried Luggage

206     . Special Receptacle or Package

215     . Bottles and Jars

229     . Envelopes, Wrappers, and Paperboard  
Boxes

150     . Purses, Wallets, and Protective Covers

383     . Flexible Bags

217     . Wooden Receptacles

248     SUPPORTS

5        . Beds

297     . Chairs and Seats

211     . Supports: Racks

108     . Horizontally Supported Planar Surfaces

**CLOSURES, PARTITIONS, PANEL**

(Building and receptacle classes for other closures,  
partitions, and panels)

267\*    . Spring Devices (Support Type)  
/ 80-112

Note. See also:

(1) 267/2-68 and 140.11-141.7

(2) 267/1.5, 69-140, and 142-182

49      . Movable or Removable Closures

160     . Flexible or Portable Closure, Partition, or  
Panel

256     . Fences

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>
<b>TEXTILES</b>	
8*	. Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers /147-159 (See also Group I for processes and compositions.)
289	. Knots and Knot Tying
28	. Textiles: Manufacturing
26	. . Textiles: Cloth Finishing
66	. . Textiles: Knitting
87	. . Textiles: Braiding, Netting, and Lace Making
139	. . Textiles: Weaving
57	. . Textiles: Spinning, Twisting, and Twining
19	. . Textiles: Fiber Preparation

**EARTH WORKING AND AGRICULTURAL MACHINERY**

405	. Hydraulic and Earth Engineering
299	. Mining or In Situ Disintegration of Hard Material
166	. Wells
175	. Boring or Penetrating the Earth
111	. Planting
171	. Unearthing Plants or Buried Objects
37	. Excavating
56	. Harvesters
172	. Earth Working

<u>Class</u>	<u>Subject</u>
194	CHECK-ACTUATED CONTROL MECHANISMS

**DISPENSING**

(For the distribution of this art, see notes to definitions of Class 222, Dispensing, and Class 220, Receptacles.)

453	. Coin Handling
141	. Fluent Material Handling, with Receiver or Receiver Coacting Means
169	. Fire Extinguishers
291	. Track Sanders
239	. Fluid Sprinkling, Spraying, and Diffusing
222	. Dispensing
221	. . Article Dispensing
232	. Deposit and Collection Receptacles
414	MATERIAL OR ARTICLE HANDLING
258	. Railway Mail Delivery
186	. Merchandising
406	. Conveyors: Fluid Current
212	. Traversing Hoists
198	. Conveyors: Power-Driven
187*	. Elevators, Industrial Lift Truck or Stationary Lift for Vehicle /200-246, 249-298, 300-315, 318-379, 400-414 (schedule sequence) (See also Group II, Electric control.)
193	. Conveyors, Chutes, Skids, Guides, and Ways
224	. Package and Article Carriers

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

Class      Subject294    . Handling: Hand and Hoist-Line  
         Implements901    . Robots  
(Note: This is a Cross-Reference Art Collection  
and does not accept applications.)

137    FLUID HANDLING

454    . Ventilation

4      . Baths, Closets, Sinks, and Spittoons

138    . Pipes and Tubular Conduits

251    . Valves and Valve Actuation

**VEHICLES**244    . Aeronautics  
      /1-13, 15-153A (schedule sequence)  
(See also Group II, Class 244/14, for  
aerial torpedoes.)114    . Ships  
      /255-19 and 26-382 (schedule sequence)  
(See also Group II, Class 114/20.1-25,  
for ship launched torpedoes.)

441    . . Buoys, Rafts, and Aquatic Devices

440    . . Marine Propulsion

191    . Electricity: Transmission to Vehicles

104    . Railways

246    . . Railway Switches and Signals

105    . . Railway Rolling Stock

238    . . Railways: Surface Track

280    . Land Vehicles (e.g., chassis and running  
         gear)Class      Subject

298    . . Land Vehicles: Dumping

180    . . Motor Vehicles

296    . Land Vehicles: Bodies and Tops  
(See Class 74, in this group, for machine  
element or mechanism.)

301    . Land Vehicles: Wheels and Axles

295    . . Railway Wheels and Axles

152    . Resilient Tires and Wheels

305    . Wheel Substitutes for Land Vehicles

213    . Railway Draft Appliances

278    . . Land Vehicles: Animal Draft Appliances

293    . Vehicle Fenders

267\*    . Spring Devices  
      /2-68, 140.11-141.7  
(schedule sequence)

Note. See also:

(1) 267/80-112

(2) 267/1.5, 69-140 and 142-182

410    FREIGHT ACCOMMODATION ON FREIGHT  
         CARRIER**MOTORS, ENGINES, PUMPS**

(See also Group II, Electricity, for electric motors.)

60      . Power Plants  
      /200.1-204, 221-721 (schedule sequence)  
(See also Group II for chemical reaction motors,  
subclasses 205-220.)

123    . Internal-Combustion Engines

417    . Pumps

91      . Motors: Expansible Chamber Type

---

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*



Class      Subject

- 415    . Rotary Kinetic Fluid Motors or Pumps
- 416    . Fluid Reaction Surfaces (i.e., Impellers)
- 185    . Motors: Spring, Weight, or Animal  
         Powered
- 418    . Rotary Expansible Chamber Devices
- 92     . Expansible Chamber Devices

**COATING, PRINTING, AND PRINTED  
MATERIAL; STATIONERY, BOOKS**

- 118    . Coating Apparatus  
      (See also Group I, Class 427, Coating  
      Processes.)
- 184    . Lubrication
- 101    . Printing
- 400    . . Typewriting Machines
- 199    . . Type Casting
- 276    . . Typesetting
- 401    . Coating Implements with Material Supply
- 281    . Books, Strips and Leaves
- 462    . Books, Strips, and Leaves for Manifolding
- 283    . Printed Matter

**MANUFACTURING, ASSEMBLING,  
INCLUDING SOME CORRELATIVE  
MISCELLANEOUS PRODUCTS**

- 164    . Metal Founding
- 266    . Metallurgical Apparatus
- 29\*    . Metal Working (General Manufacturing)  
      /1.1-25.42, 81.01-91.8, 560, 560.1, 284

Class              Subject

- Note. See also:  
(1) 29/592-559  
(2) 29/700-824  
(3) 29/650  
(4) 29/76.1-77, 33R-33T  
(5) 29/213.1-283  
(schedule sequence)
- 412    . Bookbinding: Process and Apparatus
- 53     . Package Making
- 59     . Chain, Staple, and Horseshoe Making
- 76     . Metal Tools and Implements, Making
- 79     . Button Making
- 493    . Manufacturing Container or Tube from  
      Paper; or Other Manufacturing from a Sheet or  
      Web
- 131    . Tobacco
- 147    . Coopering
- 157    . Wheelwright Machines
- 163    . Needle and Pin Making
- 227    . Elongated-Member-Driving Apparatus
- 270    . Sheet-Material Associating
- 300    . Brush, Broom, and Mop Making
- 445    . Electric Lamp or Space Discharge  
      Component or Device Manufacturing
- 29\*    . Metal Working (Methods)  
      /592-559  
      Note. See also:  
      (1) 29/1.1-25.42, 81.01-91.8, 560,  
      560.1, 284

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

GROUP III. BODY TREATMENT AND CARE, HEATING AND COOLING,  
MATERIAL HANDLING AND TREATMENT, MECHANICAL  
MANUFACTURING MECHANICAL POWER, STATIC, AND  
RELATED ARTS

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
(2) 29/700-824		29*	. Metal Working (Miscellaneous Machining) /76.1-77, 33R-33T
(3) 29/650			
(4) 29/76.1-77, 33R-33T			Note. See also:
(5) 29/213.1-283			(1) 29/1.1-25.42, 81.01-91.8, 560, 560.1, 284
(schedule sequence)			(2) 29/592-559
29*	. Metal Working (Assembling Apparatus) /700-824		(3) 29/700-824
	Note. See also:		(4) 29/650
	(1) 29/1.1-25.42, 81.01-91.8, 560, 560.1, 284		(5) 29/213.1-283
	(2) 29/592-559		(schedule sequence)
	(3) 29/650	407	. Cutters, for Shaping
	(4) 29/76.1-77, 33R-33T	30	. Cutlery
	(5) 29/213.1-283	451	. Abrading
29*	. Metal Working (Plural Diverse /650 Manufacturing Apparatus)	408	. Cutting by Use of Rotating Axially Moving Tool
	Note. See also:	82	. Turning
	(1) 29/1.1-25.42, 81.01-91.8, 560, 560.1, 284	83	. Cutting
	(2) 29/592-559	409	. Gear Cutting, Milling, or Planing
	(3) 29/700-824	125	. Stone Working
	(4) 29/76.1-77, 33R-33T	144	. Woodworking
	(5) 29/213.1-283	142	. . Wood Turning
<b>CUTTING, COMMUNUTING, AND MACHINING</b>		225	. Severing by Tearing or Breaking
483	. Tool Changing	72	. Metal Deforming
234	. Selective Cutting (e.g., Punching)	425	. Plastic Article or Earthenware Shaping or Treating: Apparatus (See also Group I, Class 264, Plastic and Nonmetallic Article Shaping or Treating: Processes.)
460	. Crop Threshing or Separating	100	. Presses
241	. Solid Material Comminution or Disintegration		
470	. Threaded, Headed Fastener, or Washer Making: Process and Apparatus		

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

Class      Subject

413      . Sheet Metal Container Making

140      . Wireworking

228      . Metal Fusion Bonding

249      . Static Molds

**MISCELLANEOUS TREATING**

(See Group I for chemical treatment and physical separation.)

494      . Imperforate Bowl: Centrifugal Separators

209      . Classifying, Separating, and Assorting Solids

366      . Agitating

134\*      . Cleaning and Liquid Contact with Solids  
/43-201  
(See also Group I for cleaning processes.)34      . . Drying and Gas or Vapor Contact with  
Solids

68      . Textiles: Fluid Treating Apparatus

38      . Textiles: Ironing or Smoothing

15      . Brushing, Scrubbing, and General Cleaning

**HANDLING OR STORING SHEETS, WEBS,  
STRANDS, AND CABLE**402      . Binder Device Releasably Engaging  
Aperture or Notch of Sheet226      . Advancing Material of Indeterminate  
Length

242      . Winding, Tensioning, or Guiding

254\*      . Implements or Apparatus for Applying Pushing  
or Pulling Force (Cable Hauling or Strand  
Placing)  
/199-417Class      Subject

271      . Sheet Feeding or Delivering

74      MACHINE ELEMENT OR  
MECHANISM475      . Planetary Gear Transmission Systems  
or Components474      Endless Belt Power Transmission Systems or  
Component476      . Friction Gear Transmission Systems or  
Components477      . Interrelated Power Delivery Controls,  
Including Engine Control

492      . Roll or Roller

464      . Rotary Shafts, Gudgeons, Housings, and  
Flexible Couplings for Rotary Shafts

384      . Bearings

173      . Tool Driving or Impacting

188      . Brakes

192      . Clutches and Power-Stop Control

254\*      . Implements or Apparatus for Applying Pushing  
or Pulling Force (Force Multipliers)  
/1-134.7, 418-427

269      . Work Holders

303      . Fluid-Pressure Brake and Analogous  
Systems16\*      MISCELLANEOUS HARDWARE  
/2.1-220, 400-404  
(See also 16/221-392)

70      . Locks

---

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

Class      Subject

267\*    . Spring Devices  
      /1.5, 69-140, 142-182

Note. See also:

(1) 267/80-112

(2) 267/2-68, 140.11, 141.7

Class      Subject

24      . Buckles, Buttons, Clasps, etc.

411    . Expanded, Threaded, Driven, Headed, Tool-  
Deformed, or Locked-Threaded Fastener

**TOOLS**

7        . Compound Tools

29\*    . Metal Working (Assembling Devices)  
      /213.1-283

Note. See also:

(1) 29/1.1-25.42, 81.01-91.8, 560,  
560.1, 284

(2) 29/592-559

(3) 29/650

(4) 29/700-824

(5) 29/76.1-77, 33R-33T

81      . Tools

403    JOINTS AND CONNECTIONS

439    . Electrical Connectors

285    . Pipe Joints or Couplings

16\*    . Miscellaneous Hardware (Hinges)

/221-392

(See also 16/2.1-220, 400-404)

279    . Chucks and Sockets

277    . Seal for a Joint or Junction

**FASTENINGS**

292    . Closure Fasteners

---

*Note 1: Subclass ranges reflect the inclusive ranges shown in the Class Schedules. These ranges may not be in increasing, sequential numerical order.*

*Note 2: Class numbers followed by an asterisk (e.g., 250\*) indicate a class that appears more than once in this list.*

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
D1	EDIBLE PRODUCTS	D20	SALES AND ADVERTISING EQUIPMENT
D2	APPAREL AND HABERDASHERY	D21	GAMES, TOYS, AND SPORTS GOODS
D3	TRAVEL GOODS AND PERSONAL BELONGINGS	D22	ARMS, PYROTECHNICS, HUNTING AND FISHING EQUIPMENT
D4	BRUSHWARE	D23	ENVIRONMENTAL HEATING AND COOLING; FLUID HANDLING AND SANITARY EQUIPMENT
D5	TEXTILE OR PAPER YARD GOODS; SHEET MATERIAL	D24	MEDICAL AND LABORATORY EQUIPMENT
D6	FURNISHINGS	D25	BUILDING UNITS AND CONSTRUCTION ELEMENTS
D7	EQUIPMENT FOR PREPARING OR SERVING FOOD OR DRINK NOT ELSEWHERE SPECIFIED	D26	LIGHTING
D8	TOOLS AND HARDWARE	D27	TOBACCO AND SMOKERS' SUPPLIES
D9	PACKAGES AND CONTAINERS FOR GOODS	D28	COSMETIC PRODUCTS AND TOILET ARTICLES
D10	MEASURING, TESTING, OR SIGNALLING INSTRUMENTS	D29	EQUIPMENT FOR SAFETY, PROTECTION, AND RESCUE
D11	JEWELRY, SYMBOLIC INSIGNIA, AND ORNAMENTS	D30	ANIMAL HUSBANDRY
D12	TRANSPORTATION	D32	WASHING, CLEANING, OR DRYING MACHINE
D13	EQUIPMENT FOR PRODUCTION, DISTRIBUTION, OR TRANSFORMATION OF ENERGY	D34	MATERIAL OR ARTICLE HANDLING EQUIPMENT
D14	RECORDING, COMMUNICATION, OR INFORMATION RETRIEVAL EQUIPMENT	D99	MISCELLANEOUS
D15	MACHINES NOT ELSEWHERE SPECIFIED		
D16	PHOTOGRAPHY AND OPTICAL EQUIPMENT		
D17	MUSICAL INSTRUMENTS		
D18	PRINTING AND OFFICE MACHINERY		
D19	OFFICE SUPPLIES; ARTISTS' AND TEACHERS' MATERIALS		